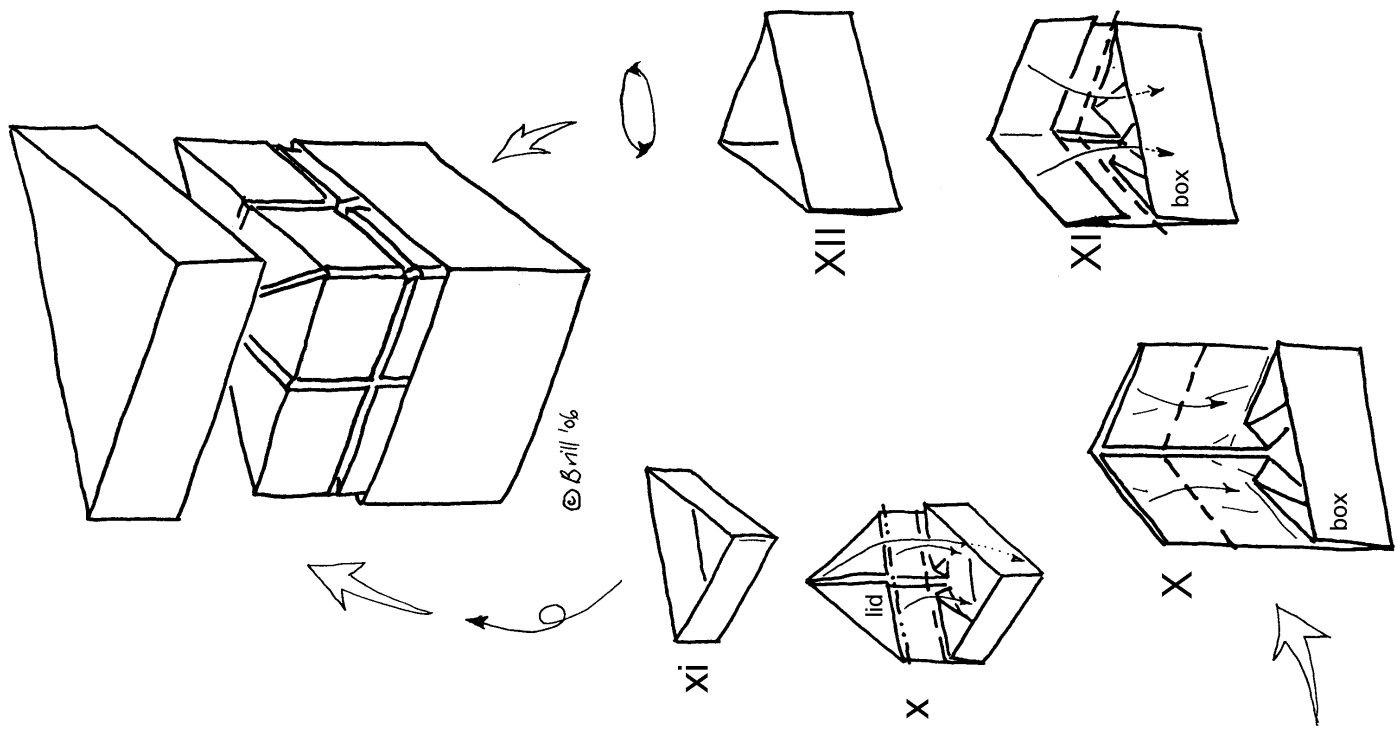
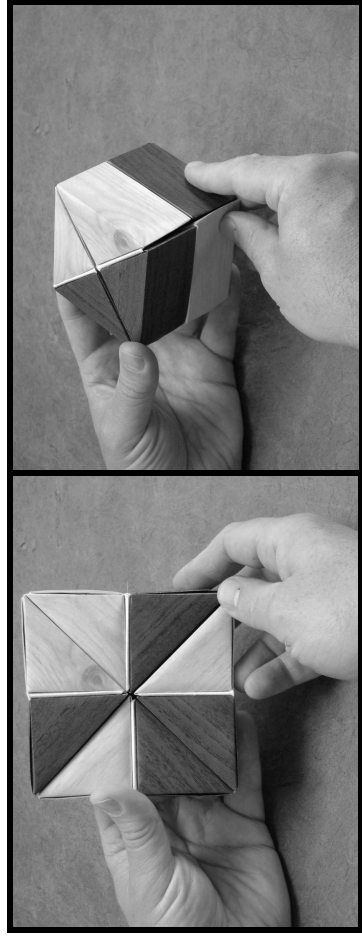
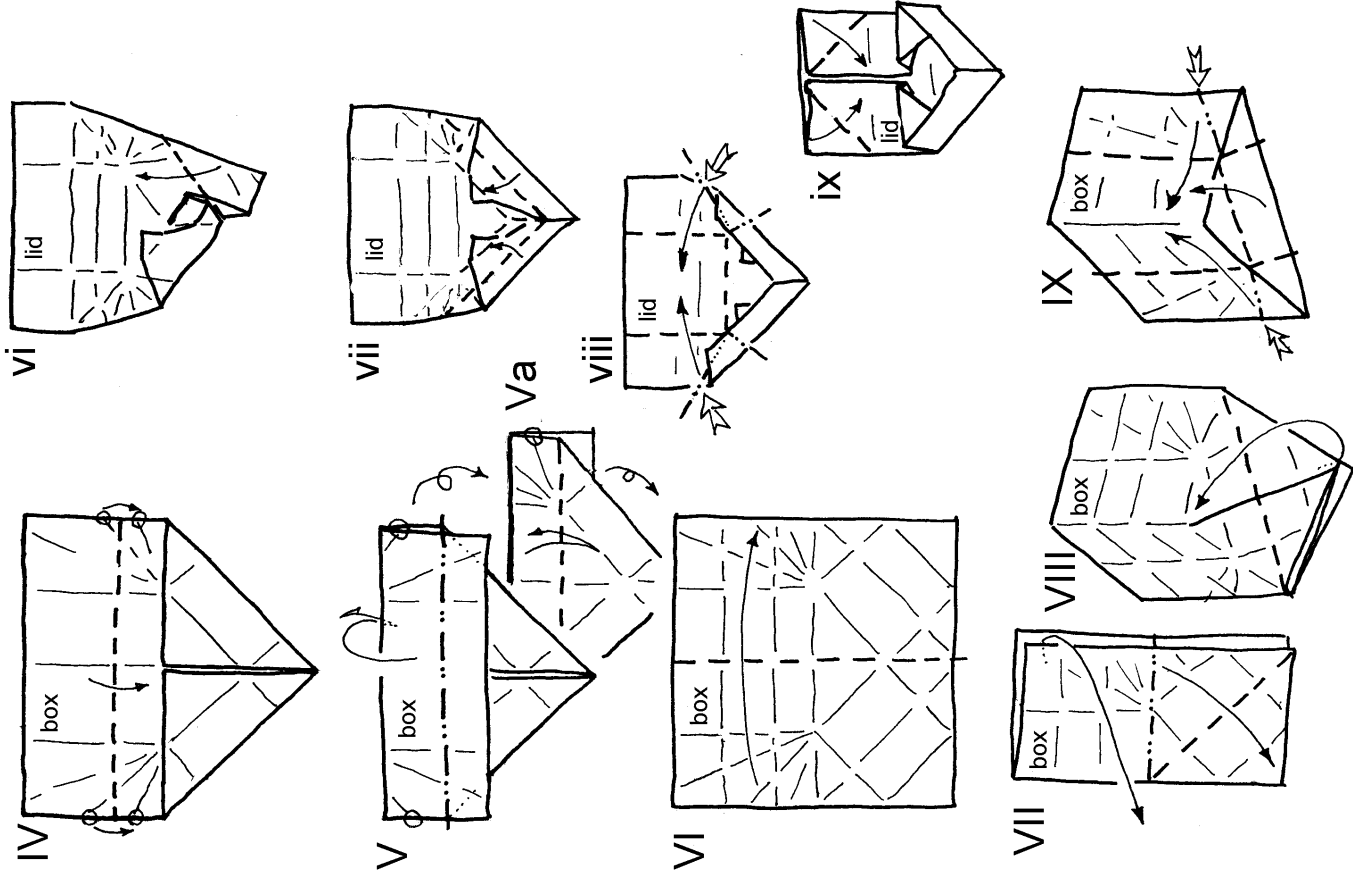


# Wedge Flexicube

by  
Dave Brill



Wedge Flexicube  
 Origami design, drawings, photographs and booklet  
 © Dave Brill 2006



## Introduction

I became obsessed by the flexicube during late 2005 and early 2006. Some years before, I had been given a wooden promotional toy in this form, and I was fascinated by its flexing movements. I tried then to reproduce it in origami... without success.

Recently I decided that I should work further on the challenge to make an origami version. Analysing it, I saw that each wedge element of the flexicube is a relatively simple shape: the faces of the wedge are two right-angled isosceles triangles, two  $1:\sqrt{2}$  rectangles, and one  $2:1$  rectangle. It seemed well within my grasp to convert this into a pure origami shape. Not so! I'd not taken account of the pockets needed to accept the hinges....

A long struggle of trials and errors followed, during which I searched for the most economical solution. Eventually, the design in this booklet emerged.

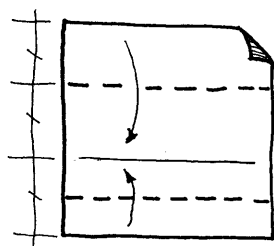
Having solved the problem of the flexicube, I thought I should design a box to contain it. Although a cubic box would have been easy to achieve, it seemed more challenging and interesting to make a triangular box with the same proportions as the wedge unit.

I hope that you'll enjoy folding the flexicube (and then playing with it!) as much as I have enjoyed the lengthy design process.

Dave Brill  
Poynton  
August 2006

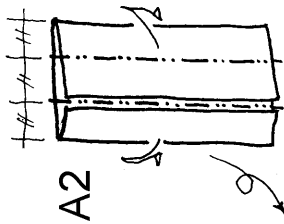
# Wedge Flexicube by David Brill

Start by folding  
4 x A units,  
then 4 x B units.  
B unit is a mirror  
image of A unit

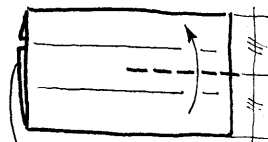


A unit  
A1

Use thin strong  
paper, at least  
15cm square.



A2



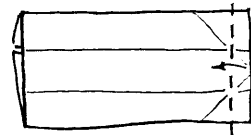
A3



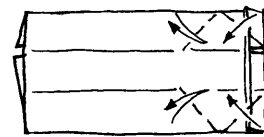
A4



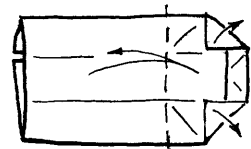
A5



A6

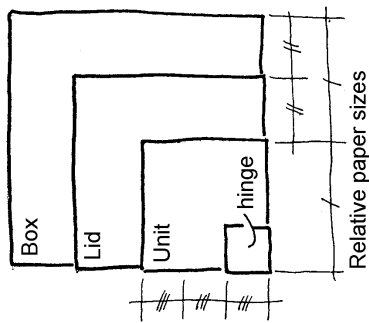


A7

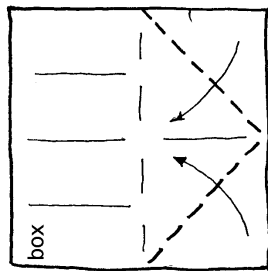


A8

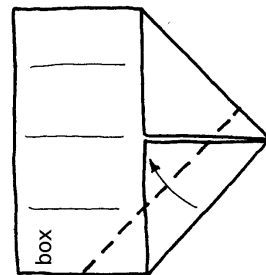
## Box and lid



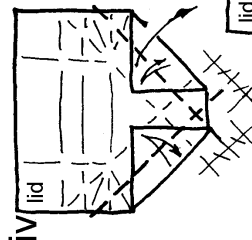
Relative paper sizes



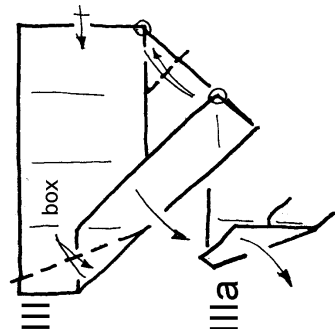
I



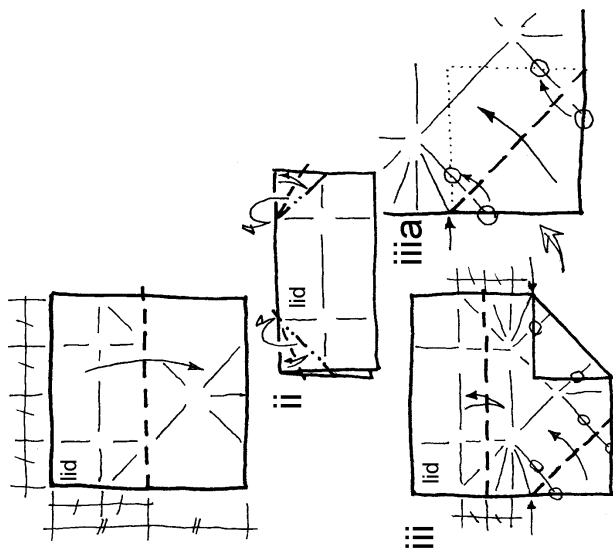
II



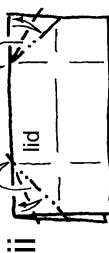
IV



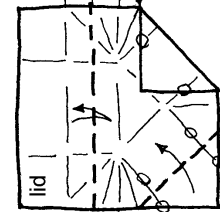
IIIa



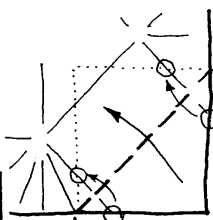
I



II



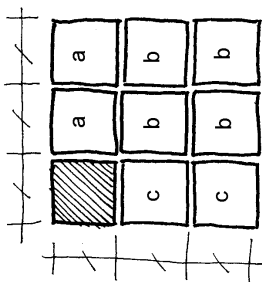
III



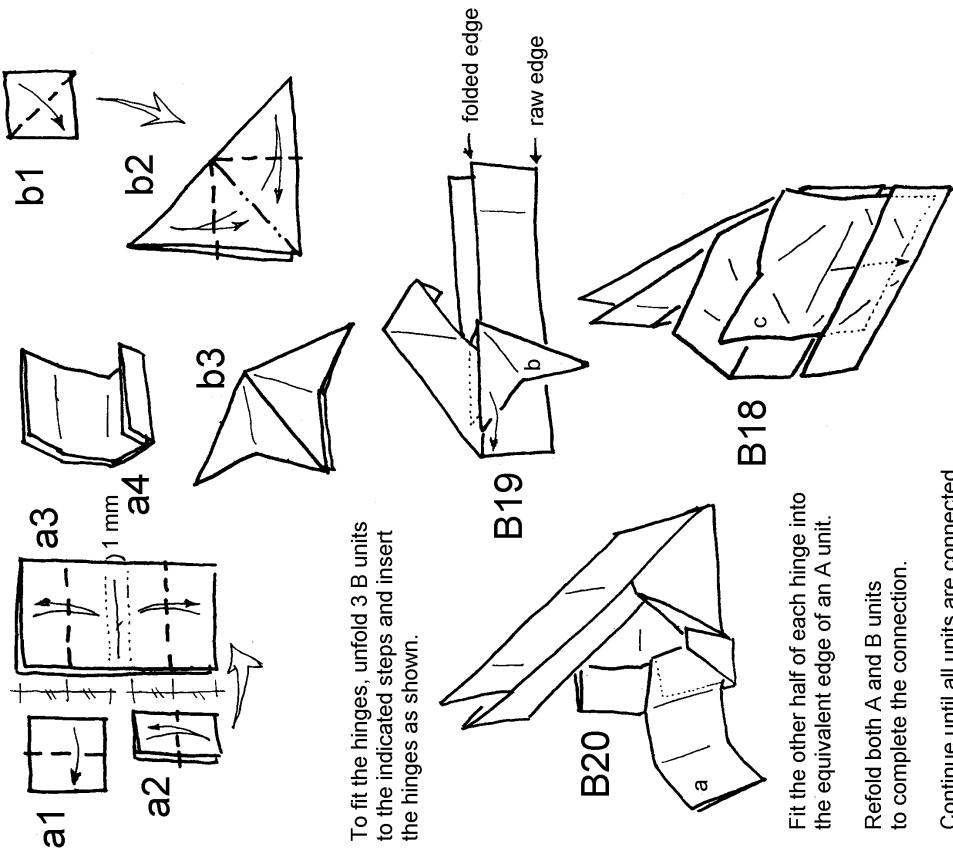
IIIa



## Hinges



Divide a square, the same size as used for A and B units

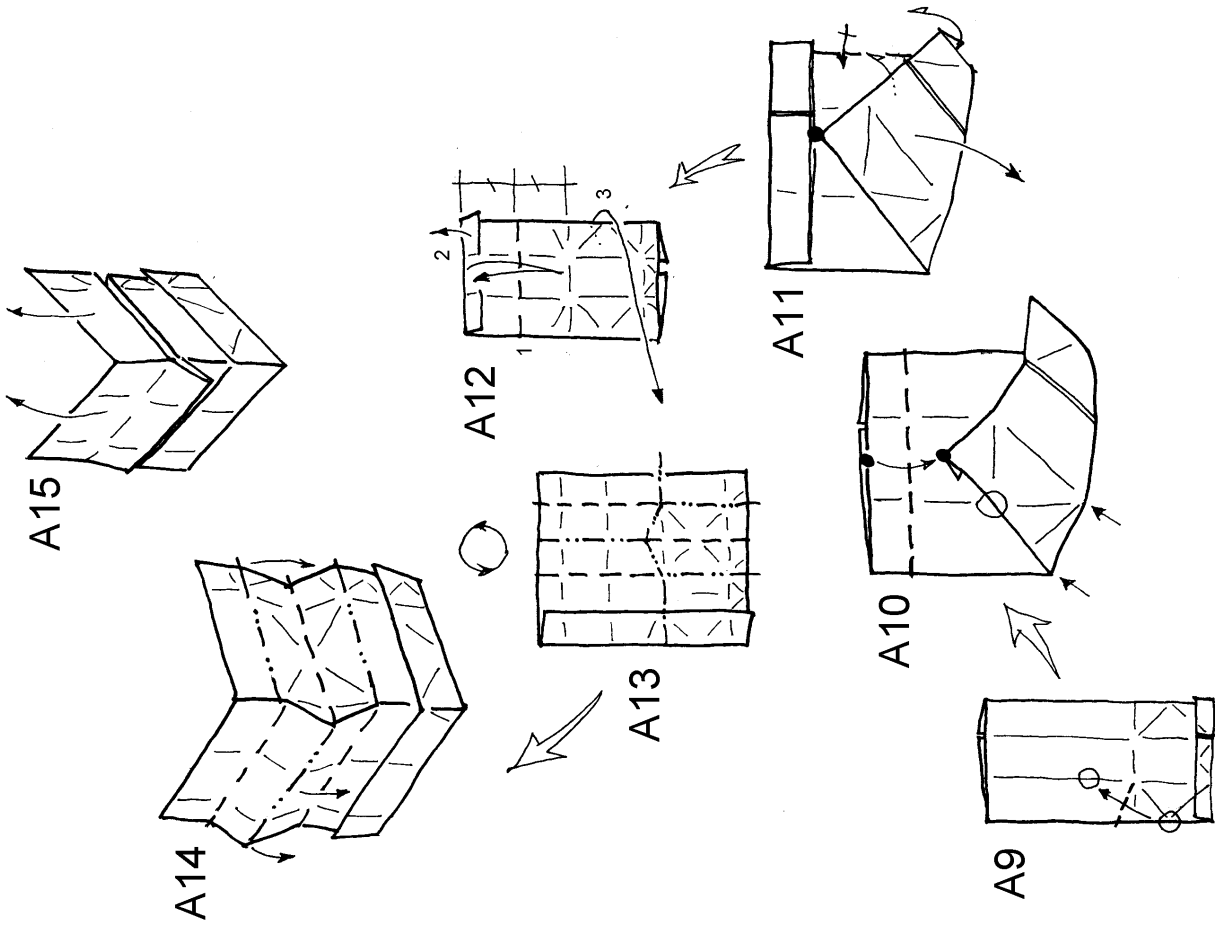


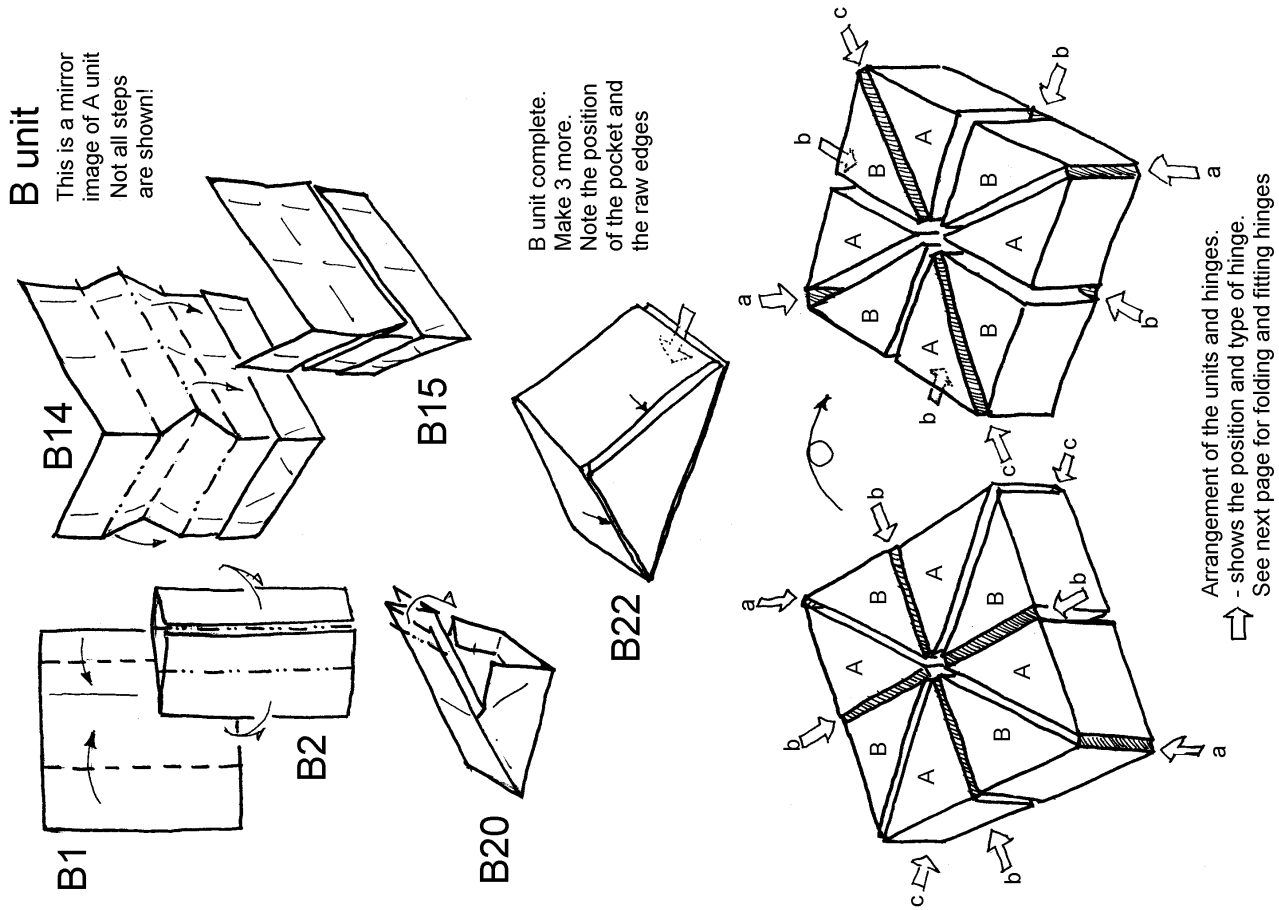
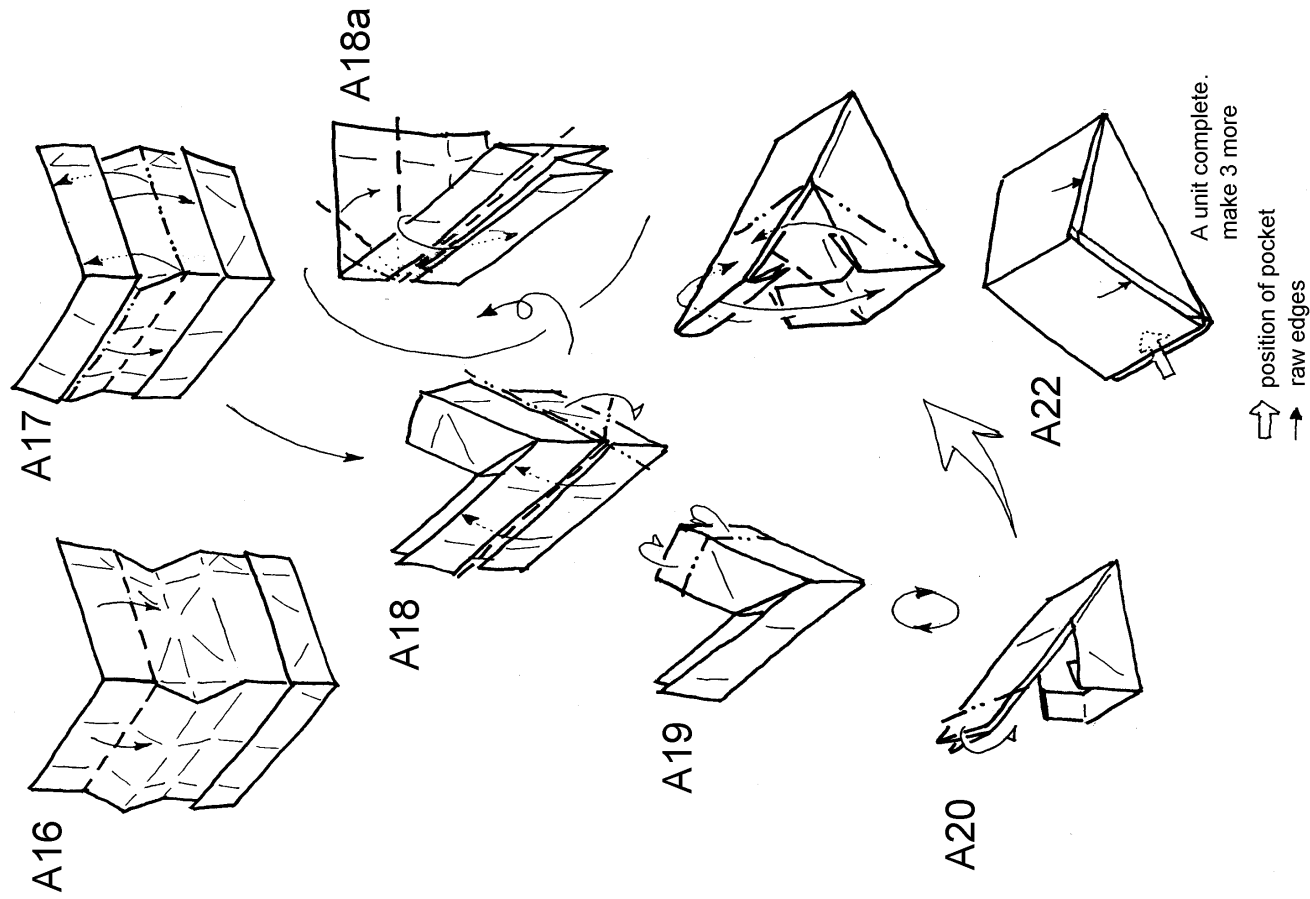
To fit the hinges, unfold 3 B units to the indicated steps and insert the hinges as shown.

Fit the other half of each hinge into the equivalent edge of an A unit.

Refold both A and B units to complete the connection.

Continue until all units are connected as shown on the previous page.





**B unit**  
This is a mirror image of A unit  
Not all steps are shown!